

BEFORE THE
POSTAL REGULATORY COMMISSION
WASHINGTON, D.C. 20268-0001

FIRST-CLASS MAIL AND PERIODICALS
SERVICE STANDARD CHANGES, 2021

Docket No. N2021-1

**RESPONSES OF THE UNITED STATES POSTAL SERVICE TO
QUESTIONS PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**
(May 26, 2021)

The United States Postal Service hereby provides its responses to Questions 1-3 and 5-31 of the Presiding Officer's Information Request No. 3, issued on May 19, 2021. Each question is stated verbatim and followed by the response. The response to Question 4 is forthcoming, as will be addressed in a separate motion for late acceptance.

Respectfully submitted,

UNITED STATES POSTAL SERVICE

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May 26, 2021

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS CINTRON TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

Question 1. Please refer to Library Reference USPS-LR-N2021-1/14, May 18, 2021, Excel file "POIR Drive Time Request.xlsx" tab "SPFC Letters and Cards."

- a. Please confirm that in FY 2020, for First-Class Single-Piece Letters and Cards with a service standard of 2 days and a drive time of within 6 hours, 86 percent were delivered within 2 days and 96 percent were delivered within 3 days (row 10). If not confirmed, please explain. Please also confirm that, with the proposed standards, this mail would be subject to a 3 day service standard and thus 96 percent would have been considered delivered on time.
- b. Please confirm that in FY 2020, for First-Class Single-Piece Letters and Cards with a service standard of 3 days and a drive time of within 20 hours, 82 percent were delivered within 3 days and 94 percent were delivered within 4 days (row 15). If not confirmed, please explain. Please also confirm that, with the proposed standards, this mail would be subject to a 4 day service standard and thus 94 percent would have been considered delivered on time.
- c. Please confirm that in FY 2020, for First-Class Single-Piece Letters and Cards with a service standard of 4 days and a drive time of within 41 hours, 71 percent were delivered within 4 days and 83 percent were delivered within 5 days (row 20). If not confirmed, please explain. Please also confirm that, with the proposed standards, this mail would be subject to a 5 day service standard and thus 83 percent would have been considered delivered on time.

RESPONSE:

- a. Confirmed, 86.2% was delivered in 2-days, 95.6% delivered in 3-days, and under the proposed service standards, this mail would be subject to a 3-day service standard.
- b. Partially confirmed, 82.4% was delivered in 3-days, 94.3% delivered in 4-days. Under the proposed service standards, this mail would be subject to a 3-day service standard.
- c. Not confirmed. The Postal Service does not currently have 4-day in the contiguous U.S. The "POIR Drive Time Request.xlsx" data file is a rollup of volumes by service standard determined by the origin processing site and destination ZIP code. Some mail volume is missorted and missent and receive

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS CINTRON TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

processing scans in unexpected locations. The groupings of the volume in the file were determined by the last processing scan and not the expected delivery location. The volume identified as 4-day and 5-day in the file would not have a valid drive time from the contiguous U.S.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS CINTRON TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 3

Question 2. Please provide an estimate of how much the FY 2020 Service Performance Results for each First-Class and Periodicals product, by service standard, would have increased if the proposed standards had been in effect in FY 2020. Please discuss whether the information provided in Library Reference USPS-LR-N2021- 1/14 is useful for the purpose of generating this estimate.

RESPONSE:

The days to deliver analysis is useful for the purpose of generating an estimate of expected service performance.

Product	SSD	On-time	Total	% on-time
SPFC Ltrs	2	6,994,303,081	7,543,181,151	92.7%
SPFC Ltrs	3	1,880,997,612	2,159,976,342	87.1%
SPFC Ltrs	4	860,104,207	931,674,543	92.3%
SPFC Ltrs	5	461,244,046	476,485,378	96.8%
SPFC Ltrs	Overall	10,196,648,946	11,111,317,414	91.77%
PFCM Ltrs	1	2,162,808,805	2,272,544,093	95.2%
PFCM Ltrs	2	2,353,555,330	2,513,207,268	93.6%
PFCM Ltrs	3	8,574,131,608	9,241,349,009	92.8%
PFCM Ltrs	4	5,696,480,695	5,906,444,839	96.4%
PFCM Ltrs	5	2,964,712,984	3,015,109,373	98.3%
PFCM Ltrs	Overall	19,588,880,617	20,676,110,489	94.74%
FCM Flats	1	14,625,625	18,204,760	80.3%
FCM Flats	2	281,875,795	355,123,473	79.4%
FCM Flats	3	184,937,562	240,967,075	76.7%
FCM Flats	4	115,256,776	133,970,908	86.0%
FCM Flats	5	66,490,345	71,207,157	93.4%
FCM Flats	Overall	648,560,478	801,268,613	80.94%
FCM	TOTAL	30,434,090,041	32,588,696,516	93.39%

Product	SSD	On-time	Total	% on-time
PER	1	1,196,542,509	1,440,542,044	83.1%
PER	2	50,843,419	58,561,770	86.8%
PER	4	184,980,815	202,380,399	91.4%
PER	5	115,291,943	139,514,067	82.6%
PER	Overall	351,116,177	400,456,236	87.68%

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS CINTRON TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

Question 3. Please discuss whether the days-to-delivery and drive time service performance results were used to identify that largest opportunities for service performance improvement and support the proposed changes.

RESPONSE:

Days-to-deliver was reviewed, without the drive time, to help identify opportunities for service performance improvement.

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS WHITEMAN TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

Question 5. Please refer to the Response to POIR No. 1, question 13.c., stating “[b]aseline transportation cost projections in the strategic plan were developed by inflating segments of the FY2021 IFP transportation costs according to Global Insight indices over a ten-year period.”⁵ Please provide details for each year of the calculation for the row titled “Transportation” in FIGURE 35: 10-Year Delivering for America Projected Profit and Loss Statement – With USPS Initiatives, in an Excel spreadsheet with links and sources explaining the reason for transportation costs holding steady at \$8.3 billion for the full year of implementation of the service standard change and 2 years onwards through FY 2024 and increasing yearly thereafter from \$8.6 billion in FY 2025 to \$10 billion in FY 2030.

RESPONSE:

See Library References USPS-LR-N2021-1-25 and USPS-LR-N2021-1-NP10.

**RESPONSE OF UNITED STATES POSTAL SERVICE INSTITUTIONAL WITNESS
OWENS (REDIRECTED FROM WITNESS WHITEMAN) TO PRESIDING OFFICER'S
INFORMATION REQUEST NO. 3**

Question 6. Please confirm that the capacity variabilities reported in Library Reference USPS-LR-N2021-1/NP2, April 21, 2021, Excel file "Transportation Savings- NonPublic" tab "Highway" cells b22 to b24, sourced from Docket No. RM2014-6, Library Reference USPS-RM2014-6/1, are based on surface transportation for all classes of mail. Please discuss whether the capacity variabilities would be lower or higher if the same type of study was done for only First-Class Mail and Periodicals.

RESPONSE:

Not confirmed. The cost-to-capacity variabilities are based upon the relationship between purchased highway transportation capacity, measured in cubic foot-miles and the cost to the Postal Service of acquiring that capacity. They are not dependent upon the classes of mail being mail transported. The cost-to-capacity variability for a given type of transportation would be the same whether the relevant change in capacity (measured in cubic foot-miles) was caused by a change in service or by changes in the amount of transported First-Class Mail, Periodicals, or any other class of mail.

**RESPONSE OF UNITED STATES POSTAL SERVICE INSTITUTIONAL WITNESS
OWENS (REDIRECTED FROM WITNESS WHITEMAN) TO PRESIDING OFFICER'S
INFORMATION REQUEST NO. 3**

Question 7. Please refer to Response to POIR No. 1, question 15. Please provide a detailed calculation of each step referenced in the response, with documentation, links and sources for the FY 2021 projections of air costs and surface costs for First- Class Mail and Periodicals for each amount listed in the table titled "Projected Transportation Costs by Mode for FY 2021 for First-Class Mail and Periodicals". Please provide a similar table with the same documentation for FY 2022, the first full year of implementation.

RESPONSE:

The requested documentation, by step, and sources are provided in the zip file named ***N2021.1.Response.POIR.No3.Q7***, which is being filed within Library Reference LR-N2021-1-26 in this docket to accompany this response. The workbook named ***N2021.1Response.POIR.No3.Q7.FY2021*** contains a separate tab for each of the six steps that were described in the response to POIR No 1, question 15.

At the time that the response was filed to POIR No. 1, question 15, similar projections for FY 2022 had not been considered. In response to this request, a similar, but not identical approach to estimating FY 2022 air and surface costs for First-Class Mail and Periodicals were developed. Two primary factors led to the underlying estimation method being changed for FY 2022: 1) transportation costs are projected for the entire fiscal year and 2) impact of the service standard change needed to be considered because implementation would be expected to occur during FY 2022.

In the accompanying zip file within the library reference, the workbook named ***N2021.1.Response.POIR.No3.Q7.FY2022*** develops and documents the estimation method used. While there are similarities to the method used in FY 2021, there are enough differences that a detailed explanation of the seven-step process used to develop the requested estimates is warranted.

**RESPONSE OF UNITED STATES POSTAL SERVICE INSTITUTIONAL WITNESS
OWENS (REDIRECTED FROM WITNESS WHITEMAN) TO PRESIDING OFFICER'S
INFORMATION REQUEST NO. 3**

One, a range of air and surface volume variable costs for FY 2022 was calculated by applying FY 2020 air and surface volume variabilities to FY 2022 estimated air and surface costs that account for the service standard change. In response to POIR No. 1, Q24, witness Hagenstein (USPS-T-3) provided a range of transportation savings between \$175 million and \$279 million for FY 2022. The ranges were applied in the same relative amounts as the air and surface savings were estimated (\$196.1 M, 70% air; \$83.5 M, 30% surface) in the testimony of witness Whiteman at 10-13. The savings ranges were subtracted from the FY 2022 projected air and surface transportation costs that did not account for the service standard change. The result of this arithmetic was a range of total air and surface costs for FY 2022 that accounted for the change in service standards. Lastly, the air and surface volume variabilities from FY 2020 were multiplied by the range of total air and surface costs to compute a range of volume variable air and surface costs for FY 2022.

Two, FY 2020 distribution keys for Air, Inter-SCF, and Other Surface were developed for First-Class Mail, Periodicals, and All Other using the transportation cost model filed in Docket No. ACR2020, USPS-FY20-32, workbook CS14-Public-FY20.

Three, product weights from the Q1 and Q2 FY 2021 Revenue Pieces and Weight (RPW) report were used to compute ratios by product that adjusted the Air, Inter-SCF, and Other Surface distribution factors from FY 2020. For FY 2022, the ratio based on RPW weights for product p was the following:

$$Ratio_{pFY22} = \left(\frac{\%RPWWeight_{pt=Q2YTFY21}}{\%RPWWeight_{pt=Q2YTFY20}} \right)^2$$

**RESPONSE OF UNITED STATES POSTAL SERVICE INSTITUTIONAL WITNESS
OWENS (REDIRECTED FROM WITNESS WHITEMAN) TO PRESIDING OFFICER'S
INFORMATION REQUEST NO. 3**

For FY 2021, similar ratios were used, but, for FY 2022, to account for another year of changing mail mix, each product ratio was applied a second time (i.e., the product ratio was squared).

Four, the product ratio from step three was applied to the Air, Inter-SCF, and Other Surface distribution keys from FY 2020. This results in sets of distribution factors that do not add to unity. Hence, the distribution factors were rescaled by taking the ratio of the unscaled key to the composite amount (rescaling was not done for FY 2021, its impact is small but more meaningful in FY 2022).

Five, the scaled distribution keys for First-Class Mail from step 4 were multiplied by the expected air to surface impacts resulting from the service standard change. Hence, the First-Class Mail air distribution factors were multiplied by 0.507 (see Whiteman testimony at 10, $1 - 0.493 = 0.507$) and the First-Class Inter-SCF distribution factors were multiplied by 1.114 (see Hagenstein testimony at 6, $88\% / 79\% = 1.114$). There were no changes made to the distribution keys for Periodicals or for those related to the Other Surface mode. The resulting distribution factors were rescaled by, again, taking the ratio of the unscaled key to the composite amount.

Six, a cost weighted unscaled distribution key was computed using the Inter-SCF and Other Surface distribution keys and costs. Subsequently, the unscaled surface distribution key was scaled so it would add to unity. No changes were made to the air distribution keys with this step.

Seven, the air and surface distribution keys from step six were multiplied by the estimated ranges of air and surface volume variable costs from step one to compute a range of air and surface costs for products within First-Class Mail and Periodicals.

**RESPONSE OF UNITED STATES POSTAL SERVICE INSTITUTIONAL WITNESS
OWENS (REDIRECTED FROM WITNESS WHITEMAN) TO PRESIDING OFFICER'S
INFORMATION REQUEST NO. 3**

Lastly, the ranges of volume variable air and surface costs were summed by class to develop the estimated ranges of air and surface costs for First-Class and Periodicals.

For FY 2022,

This seven step process resulted in estimated air and surface costs for First-Class Mail ranging from \$182 million to \$186 million and \$518 million to \$521 million respectively. For Periodicals, the corresponding air and surface ranges were \$7 million to \$8 million and \$93 million to \$94 million respectively. The table contains the air and surface ranges of volume variable costs for First-Class Mail and Periodicals for FY 2022.

Projected FY 2022 Air and Surface Volume Variable Costs for First-Class Mail and Periodicals

FY 2022 Projected Costs	Low Air (\$m)	High Air (\$m)	Low Surface (\$m)	High Surface (\$m)
First-Class	\$ 181.6	\$ 186.1	\$ 517.6	\$ 521.0
Periodicals	\$ 7.3	\$ 7.5	\$ 93.3	\$ 93.9

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS HAGENSTEIN TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

Question 8. Please refer to response of Witness Whiteman to Postcom interrogatory PostCom/USPS-T-2-1, which states, "While it is possible that the Postal Service might not end the year at the \$9.7 billion net loss projected in the 2021 IFP, the end-of-year net loss could reasonably be expected to fall anywhere in the range of \$2.0 billion to \$9.0 billion."⁷ Please provide the revenue and cost assumptions supporting the updated end-of-year FY 2021 net loss of \$2.0 billion and \$9.0 billion. Please provide an estimated end-of-year FY 2021 cash balance updated for the revised range of net loss.

RESPONSE:

The charts below show the various sets of revenue and cost assumptions supporting the \$2.0 billion to \$9.0 billion range of projected FY2021 net loss figures, along with estimated end-of-year FY2021 cash balances under each scenario. Multiple scenarios are considered given the anticipated decline in revenue in the last six months of the year relative to the first six months, coupled with the unknown status of how the COVID-19 pandemic will continue to impact our business. The model applies the projected percent of change in expenses identically across all expense categories, but it is acknowledged that expenses in the second half of the year will vary across the expense categories, since each expense category has its own unique set of influences.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS HAGENSTEIN TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 3

\$2 Billion Net Loss Scenarios

-8.0% <<< select projected Revenue Growth % here

-7.0% <<< select projected Expense Growth % here

	Six Months Ended March 31 2021	Forecast Rest of Year	End of Year Forecast
Total Revenue	40,403	37,171	77,574
Operating Expenses			
Compensation & Benefits	25,600	23,808	49,408
Retirement Benefits	3,580	3,329	6,909
Retiree Health Benefits	2,400	2,232	4,632
Workers' Compensation	692	644	1,336
Non-Cash Workers' Compensation	(2,230)	-	(2,230)
Transportation	4,945	4,599	9,544
Other Operating Expenses	5,115	4,757	9,872
Net Interest	65	60	125
Net income (loss)	236	(2,258)	(2,022)

Operating Activities	5,116
Operating Activities: RHB accrued but not paid	4,632
Investing activities	(2,000)
Financing activities	(3,000)
Cash at beginning of year	14,712
Cash at beginning of period	17,437

-9.0% <<< select projected Revenue Growth % here

-8.0% <<< select projected Expense Growth % here

	Six Months Ended March 31 2021	Forecast Rest of Year	End of Year Forecast
Total Revenue	40,403	36,767	77,170
Operating Expenses			
Compensation & Benefits	25,600	23,552	49,152
Retirement Benefits	3,580	3,294	6,874
Retiree Health Benefits	2,400	2,208	4,608
Workers' Compensation	692	637	1,329
Non-Cash Workers' Compensation	(2,230)	-	(2,230)
Transportation	4,945	4,549	9,494
Other Operating Expenses	5,115	4,706	9,821
Net Interest	65	60	125
Net income (loss)	236	(2,239)	(2,003)

Operating Activities	5,116
Operating Activities: RHB accrued but not paid	4,608
Investing activities	(2,000)
Financing activities	(3,000)
Cash at beginning of year	14,712
Cash at beginning of period	17,433

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS HAGENSTEIN TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 3

-10.0%

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-9.0%

<<< select projected Expense Growth % here

	Six Months Ended March 31 2021	Forecast Rest of Year	End of Year Forecast
Total Revenue	40,403	36,363	76,766
Operating Expenses			
Compensation & Benefits	25,600	23,296	48,896
Retirement Benefits	3,580	3,258	6,838
Retiree Health Benefits	2,400	2,184	4,584
Workers' Compensation	692	630	1,322
Non-Cash Workers' Compensation	(2,230)	-	(2,230)
Transportation	4,945	4,500	9,445
Other Operating Expenses	5,115	4,655	9,770
Net Interest	65	59	124
Net income (loss)	236	(2,219)	(1,983)

Operating Activities	5,116
Operating Activities: RHB accrued but not paid	4,584
Investing activities	(2,000)
Financing activities	(3,000)
Cash at beginning of year	14,712
Cash at beginning of period	17,429

-11.0%

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-10.0%

<<< select projected Expense Growth % here

	Six Months Ended March 31 2021	Forecast Rest of Year	End of Year Forecast
Total Revenue	40,403	35,959	76,362
Operating Expenses			
Compensation & Benefits	25,600	23,040	48,640
Retirement Benefits	3,580	3,222	6,802
Retiree Health Benefits	2,400	2,160	4,560
Workers' Compensation	692	623	1,315
Non-Cash Workers' Compensation	(2,230)	-	(2,230)
Transportation	4,945	4,451	9,396
Other Operating Expenses	5,115	4,604	9,719
Net Interest	65	59	124
Net income (loss)	236	(2,199)	(1,963)

Operating Activities	5,116
Operating Activities: RHB accrued but not paid	4,560
Investing activities	(2,000)
Financing activities	(3,000)
Cash at beginning of year	14,712
Cash at beginning of period	17,425

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS HAGENSTEIN TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 3

-18.0%

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-16.5%

<<< select projected Expense Growth % here

	Six Months Ended March 31 2021	Forecast Rest of Year	End of Year Forecast
Total Revenue	40,403	33,130	73,533
Operating Expenses			
Compensation & Benefits	25,600	21,376	46,976
Retirement Benefits	3,580	2,989	6,569
Retiree Health Benefits	2,400	2,004	4,404
Workers' Compensation	692	578	1,270
Non-Cash Workers' Compensation	(2,230)	-	(2,230)
Transportation	4,945	4,129	9,074
Other Operating Expenses	5,115	4,271	9,386
Net Interest	65	54	119
Net income (loss)	236	(2,271)	(2,035)

Operating Activities	5,116
Operating Activities: RHB accrued but not paid	4,404
Investing activities	(2,000)
Financing activities	(3,000)
Cash at beginning of year	14,712
Cash at beginning of period	17,196

-19.0%

<<< select projected Revenue Growth % here

-17.5%

<<< select projected Expense Growth % here

	Six Months Ended March 31 2021	Forecast Rest of Year	End of Year Forecast
Total Revenue	40,403	32,726	73,129
Operating Expenses			
Compensation & Benefits	25,600	21,120	46,720
Retirement Benefits	3,580	2,954	6,534
Retiree Health Benefits	2,400	1,980	4,380
Workers' Compensation	692	571	1,263
Non-Cash Workers' Compensation	(2,230)	-	(2,230)
Transportation	4,945	4,080	9,025
Other Operating Expenses	5,115	4,220	9,335
Net Interest	65	54	119
Net income (loss)	236	(2,251)	(2,015)

Operating Activities	5,116
Operating Activities: RHB accrued but not paid	4,380
Investing activities	(2,000)
Financing activities	(3,000)
Cash at beginning of year	14,712
Cash at beginning of period	17,192

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS HAGENSTEIN TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 3

-20.0%

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-18.5%

<<< select projected Expense Growth % here

	Six Months Ended March 31 2021	Forecast Rest of Year	End of Year Forecast
Total Revenue	40,403	32,322	72,725
Operating Expenses			
Compensation & Benefits	25,600	20,864	46,464
Retirement Benefits	3,580	2,918	6,498
Retiree Health Benefits	2,400	1,956	4,356
Workers' Compensation	692	564	1,256
Non-Cash Workers' Compensation	(2,230)	-	(2,230)
Transportation	4,945	4,030	8,975
Other Operating Expenses	5,115	4,169	9,284
Net Interest	65	53	118
Net income (loss)	236	(2,231)	(1,995)
Operating Activities			5,116
Operating Activities: RHB accrued but not paid			4,356
Investing activities			(2,000)
Financing activities			(3,000)
Cash at beginning of year			14,712
Cash at beginning of period			17,188

-21.0%

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-19.5%

<<< select projected Expense Growth % here

	Six Months Ended March 31 2021	Forecast Rest of Year	End of Year Forecast
Total Revenue	40,403	31,918	72,321
Operating Expenses			
Compensation & Benefits	25,600	20,608	46,208
Retirement Benefits	3,580	2,882	6,462
Retiree Health Benefits	2,400	1,932	4,332
Workers' Compensation	692	557	1,249
Non-Cash Workers' Compensation	(2,230)	-	(2,230)
Transportation	4,945	3,981	8,926
Other Operating Expenses	5,115	4,118	9,233
Net Interest	65	52	117
Net income (loss)	236	(2,211)	(1,975)
Operating Activities			5,116
Operating Activities: RHB accrued but not paid			4,332
Investing activities			(2,000)
Financing activities			(3,000)
Cash at beginning of year			14,712
Cash at beginning of period			17,184

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS HAGENSTEIN TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 3

-22.0%

<<< select projected Revenue Growth % here

-20.5%

<<< select projected Expense Growth % here

	Six Months Ended March 31 2021	Forecast Rest of Year	End of Year Forecast
Total Revenue	40,403	31,514	71,917
Operating Expenses			
Compensation & Benefits	25,600	20,352	45,952
Retirement Benefits	3,580	2,846	6,426
Retiree Health Benefits	2,400	1,908	4,308
Workers' Compensation	692	550	1,242
Non-Cash Workers' Compensation	(2,230)	-	(2,230)
Transportation	4,945	3,931	8,876
Other Operating Expenses	5,115	4,066	9,181
Net Interest	65	52	117
Net income (loss)	236	(2,191)	(1,955)
Operating Activities			5,116
Operating Activities: RHB accrued but not paid			4,308
Investing activities			(2,000)
Financing activities			(3,000)
Cash at beginning of year			14,712
Cash at beginning of period			17,180

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS HAGENSTEIN TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 3

\$9 Billion Net Loss Scenarios

-19.0% <<< select projected Revenue Growth % here

-1.0% <<< select projected Expense Growth % here

	Six Months Ended March 31 2021	Forecast Rest of Year	End of Year Forecast
Total Revenue	40,403	32,726	73,129
Operating Expenses			
Compensation & Benefits	25,600	25,344	50,944
Retirement Benefits	3,580	3,544	7,124
Retiree Health Benefits	2,400	2,376	4,776
Workers' Compensation	692	685	1,377
Non-Cash Workers' Compensation	(2,230)	-	(2,230)
Transportation	4,945	4,896	9,841
Other Operating Expenses	5,115	5,064	10,179
Net Interest	65	64	129
Net income (loss)	236	(9,247)	(9,011)
Operating Activities			5,116
Operating Activities: RHB accrued but not paid			4,776
Investing activities			(2,000)
Financing activities			(3,000)
Cash at beginning of year			14,712
Cash at beginning of period			10,593

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS HAGENSTEIN TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 3

-20.0%

<<< select projected Revenue Growth % here

-2.0%

<<< select projected Expense Growth % here

	Six Months Ended March 31 2021	Forecast Rest of Year	End of Year Forecast
Total Revenue	40,403	32,322	72,725
Operating Expenses			
Compensation & Benefits	25,600	25,088	50,688
Retirement Benefits	3,580	3,508	7,088
Retiree Health Benefits	2,400	2,352	4,752
Workers' Compensation	692	678	1,370
Non-Cash Workers' Compensation	(2,230)	-	(2,230)
Transportation	4,945	4,846	9,791
Other Operating Expenses	5,115	5,013	10,128
Net Interest	65	64	129
Net income (loss)	236	(9,227)	(8,991)

Operating Activities	5,116
Operating Activities: RHB accrued but not paid	4,752
Investing activities	(2,000)
Financing activities	(3,000)
Cash at beginning of year	14,712
Cash at beginning of period	10,589

-22.0%

<<< select projected Revenue Growth % here

-4.0%

<<< select projected Expense Growth % here

	Six Months Ended March 31 2021	Forecast Rest of Year	End of Year Forecast
Total Revenue	40,403	31,514	71,917
Operating Expenses			
Compensation & Benefits	25,600	24,576	50,176
Retirement Benefits	3,580	3,437	7,017
Retiree Health Benefits	2,400	2,304	4,704
Workers' Compensation	692	664	1,356
Non-Cash Workers' Compensation	(2,230)	-	(2,230)
Transportation	4,945	4,747	9,692
Other Operating Expenses	5,115	4,910	10,025
Net Interest	65	62	127
Net income (loss)	236	(9,187)	(8,951)

Operating Activities	5,116
Operating Activities: RHB accrued but not paid	4,704
Investing activities	(2,000)
Financing activities	(3,000)
Cash at beginning of year	14,712
Cash at beginning of period	10,581

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS HAGENSTEIN TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

Question 9. Please refer to Response to POIR No. 1, question 19.a.i., which states "The baseline model using current service standards output 4,073 routings, daily mileage of 2,139,302, and 66% trip utilization." Please compare the outputs of the baseline model to the actual transportation used by the Postal Service. Please provide the actual routes, daily miles, and trip utilization for the March 2020 period.

RESPONSE:

Surface Visibility data for March 2020 showed the Postal Service operated an average of 6,308 trips per day with an average utilization of 39% and an average daily mileage of 2,406,448. Note that the data was filtered to isolate transportation between the nodes in the model carrying products modeled to remove transportation outside the scope of this proposal.

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS HAGENSTEIN TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

Question 10. Please provide another example of a project where the Postal Service has used the Blue Yonder modeling software to identify cost savings opportunities. Please discuss the projected cost savings and the actual cost savings of this project, and detail both how the projection was developed and the actual cost savings were measured.

RESPONSES:

The Postal Service used the Blue Yonder modeling software to model morning Highway Contract Routes (HCR) transportation, shifting from pre-determined static trips to volume-based trips that are dynamically planned. Projected savings was 12.5% reduction in mileage. Actual savings is calculated by comparing the baseline rate per mile and mileage to the new mileage and rate per mile. The savings calculation takes into consideration fuel increases/decreases as well as inflation. The mileage is simply compared to the baseline month (baseline before optimization) to the current mileage.

The actual savings for the example sites is in the table below:

		Savings	% Savings	% Mileage Savings
<u>Fort Myers</u>	FY19 Q3 - FY21 Q2 (Dynamic)	110,955.67	9.77%	11.60%
<u>Burlington</u>	FY19 Q3 - FY21 Q2 (Dynamic)	136,719.63	22.31%	11.93%

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS HAGENSTEIN TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

Question 11. Please refer to Response to POIR No. 1, question 24. Please explain whether the estimated reduction in mileage is expected only in the first year the proposed service standards would be implemented (FY 2022). Please provide additional information related to cost savings and future plans for network improvements.

RESPONSES:

The changes resulting in mileage reductions are expected to be implemented the first year. The benefit of those improvements will remain in effect in subsequent years and will set a new baseline network for the United States Postal Service for future transportation related improvement efforts. After implementing the extended surface First-Class Mail network, additional savings are expected related to consolidating the NDC to NDC network, as described on page 29 in United States Postal Service, Delivering for America: Our Vision and Ten-Year Plan to Achieve Financial Sustainability and Service Excellence (2021).

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS HAGENSTEIN TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

Question 12. Please refer to the Response to POIR No. 1, question 24.a. Please provide the source for the estimated cost savings of \$175 M to \$279 M in FY 2022. Please explain how long it will take to realize the full cost savings from this project, and how the Postal Service plans to measure how savings are realized.

RESPONSE:

The methodology for calculating the estimated savings is described in the testimony of witness Whiteman (USPS-T-2, pages 8 – 14). Savings are expected to be realized in year one, and the Postal Service tracks savings expectations for all major initiatives.

Annual HCR costs will be pulled at the start of implementation and throughout to monitor annual contract cost reductions of existing transportation and any additions.

Volume data for lanes shifting from Air to Surface will be recorded and savings estimates tracked separately to compare against new lanes implemented to move air-to-surface volumes.

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS HAGENSTEIN TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

Question 13. Please confirm that one outcome of the proposal will be to increase the crossdocking and dispatch costs at Surface Transfer Centers. If not confirmed, please explain. Please identify where the extra cost associated with increased workload at Surface Transfer Centers are calculated.

RESPONSE:

The implementation will result in more volume transferring via Surface Transfer Centers.

Cost increases associated with the increased workload at the STCs were not a factor in routing determination; however, prior research indicates that implementation is not expected to significantly exceed current capabilities of these locations.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS HAGENSTEIN TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 3

Question 14. The Postal Service explains that the current FCM service standards account for surface transit times with respect to one-day and two-day service standards, but not for service standards of three or more days. USPS-T-1 at 18. The Postal Service explains further that the one-day service standard applies to intra-SCF Presort FCM properly accepted before the day-zero CET, and that the two-day service standard applies to intra-SCF single piece domestic FCM properly accepted before the day-zero CET, as well as to inter-SCF domestic FCM properly accepted before the day-zero CET, if the drive time between the origin P&DC and destination SCF is 6 hours or less. Id. Please refer to Library Reference USPS-LR-N2021-1/3, Excel file "3_Zip3_OD_Pairs.xlsx" (3-digit ZIP Pairs file), tab "OD_Contiguous" and Excel file "3_SSD_5D_Vol_Impacts_CONUS.xlsx" (Modeling results file), tab "FCM_Contiguous_Impact."

- a. Please confirm that intra-SCF domestic Presort FCM, intra-SCF single piece domestic FCM, and inter-SCF domestic FCM volumes were included in the model as volumes subject to the current two-day service standard (i.e. volume with "FCM_SSD"=2 in the 3-digit ZIP Pairs file).
- b. Please explain whether intra-SCF domestic Presort and intra-SCF single piece domestic FCM volumes are transported only within respective SCFs. Please also explain whether these volumes, if included in the model, were modeled as travelling 0 miles, with 0 hours of transit time between origin and destination facilities, in the modeled inter-SCF network.
- c. Please confirm that the reduced geographic reach of two-day origin- destination pairs (OD Pairs) under the proposed two-day service standards would have no impact on intra-SCF FCM volumes currently subject to one- and two-day service standards, and would only reduce the inter-SCF single piece domestic FCM volume subject to a two-day standard. If not confirmed, please explain.

Additionally:

- i. Please confirm that the value in the Modeling results file, tab "FCM_Contiguous_Impact," cell C4, includes intra-SCF domestic Presort FCM, intra-SCF single piece domestic FCM, and inter-SCF single piece domestic FCM volumes within 3 hours drive time between OD Pairs. If not confirmed, please explain. Please also isolate separately the inter-SCF single piece domestic FCM volume which is included in cell C4.
- ii. Please confirm that the value in cell C5 includes inter-SCF domestic FCM volumes with 3 to 6 hours of drive time between OD Pairs. If not confirmed, please explain.
- iii. Please explain the volume in cell C6, which pertains to 1 OD Pair.
- d. Please explain whether the Postal Service expects to employ more or less direct transportation for volumes within 3 hours drive time of origin. Please identify the current surface and transportation costs of inter-SCF First-Class subject to the proposed and current two-day service standard, and the projected change to this mail after implementation of this proposal.

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS HAGENSTEIN TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

RESPONSE:

- a. Confirmed. Turnaround volumes that do not impact the network were excluded from the Transportation Model, but were included in the impact analysis.
- b. Please see response to 14.a.
- c. Not confirmed. In SCFs where the originating volume is processed in a facility greater than 3-hours drive time, intra-SCF volume would be 3-day under this proposal.
 - i. Confirmed
 - ii. Confirmed
 - iii. The downgrade from 2-day to 4-day is Casper WY to Rapid City SD. Rapid City is an SCF, serviced by Sioux Falls SD ADC. Based on the business rules proposed, where travel time is based on OPDC to DADC to DSCF, this line of travel sums to 932.8 miles and just over 20 hours of travel time.
- d. The Postal Service does not have specific cost estimates for Inter-SCF First-Class two-day lanes. The Postal Service does not expect to employ more direct transportation for volumes within 3-hours drive time from origin.

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS HAGENSTEIN TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

Question 15. Please see Attachment, filed under seal

RESPONSE:

Please see the nonpublic response of witness Hagenstein, provided under seal as part
of USPS-LR-N2021-1-NP9.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS HAGENSTEIN TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 3

Question 16. The Postal Service states that the overall current network utilization is approximately 40 percent. Response to POIR No. 1, question 21.d.iii-iv. The Postal Service also explains that the maximum trailer utilization modeled was 41 percent (1,575 ft³ / 3,816 ft³). Response to POIR No. 1, question 21.d.i.-ii. Please explain how the following utilizations were accomplished/calculated:

- a. For the baseline network in which current service standards applied, trip utilization was 66 percent. Response to POIR No. 1, question 19.a.i. Please explain the 22 percentage point difference between actual average utilization and utilization in the baseline network. Please also explain how 66 percent utilization is possible with a constraint of a maximum modeled capacity utilization of 41 percent.
- b. Please explain the 74 percent trip utilization which resulted from model's first iteration, considering the 41 percent trailer utilization constraint referenced above. Response to POIR No. 1, question 19.a.i.
- c. Please explain the 82 percent trip utilization for the new routings, established to carry FCM diverted from the air network and determined to be cost effective. Response to POIR No. 1, question 19.c.ii. In your explanation, please address both the 41 percent trailer utilization constraint and the fact that only FCM volume was added to the model during the second iteration. Responses to POIR No. 1, question 19.b.ii.

RESPONSE:

Network utilization is calculated by floor utilization, or the number of containers that can be loaded into a trailer or truck, single layer. Container scan data is used to calculate the load percentage, or utilization of a trip. The network utilization at the time the testimony was developed was approximately 40%.

Cubic-foot capacity of a 53-foot trailer is approximately 3,816, based on the dimensions of the trailer. 42 All-Purpose Containers can fit on a 53' trailer and can hold approximately 1,575 cubic feet of mail volume. 42 APCs loaded on a 53-foot trailer would show 100% utilization for that trip.

- a. The baseline model with current service standards is optimized using the same constraints as the proposed service standard change scenario allowing it to produce a transportation solution greater than the current state. The model calculations are also not dependent on scanning compliance. As stated above in

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS HAGENSTEIN TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

response to 16, a full truck is considered 1,575 cubic feet , based on the maximum containers that can fit in a trailer. 3,816 cubic feet capacity is theoretical maximum in a trailer.

- b. The model is not constrained to 41% floor utilization used to measure network capacity.
- c. The increase in utilization is due to the model layering in additional First-Class Mail volumes onto the pre-existing trips from the first iteration. In addition, the dedicated lanes traveling longer distances require higher utilization to be more cost effective than air.

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS HAGENSTEIN TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

Question 17. Please provide information related to Highway Contract Route (HCR) contracts and the estimated reduction in mileage, as requested below.

- a. Please explain how a need for extra trip can be determined, and extra trip scheduled, in advance. See Response to POIR No. 1, question 17.d.
- b. Please explain whether the Postal Service relies completely on regularly scheduled trips, under HCR contracts with typical duration of about 4 years, to accommodate the separate networks for separate products or whether it relies, and to what extent, on extra trips, scheduled on an as- needed basis and/or scheduled in advance, to accommodate such separate networks. See USPS-T-3 at 6.
- c. The Postal Service explains that the implementation of more efficient routings with reduced mileage, "could impact" regular, exceptional, or emergency highway contracts. Response to POIR No. 1, question 17.e.
 - i. Considering the projected mileage reduction could impact regular, exceptional, or emergency contracts, please explain why expenses in General Ledger accounts 53619, 53615, and 53611 for Inter- Area, Inter-Cluster, and Inter-P&DC exceptional trips were not included in baseline costs of surface network to calculate savings. See USPS-T-2 at 12-14; Responses to POIR No. 1, question 17.d.- e.
 - ii. Please explain potential challenges the Postal Service might face when implementing new routings with reduced mileages for trips under regular HCR contracts, which are typically in effect for 4 years. Please compare those with the ease of reducing mileages for exceptional trips.
 - iii. Please describe whether elimination of extra trips within inter-SCF network, currently scheduled to mitigate plant processing delays, delays associated with dock operations, or personnel issues, would be the first action the Postal Service would take once new service standards (enabling the Postal Service to accommodate such delays) are implemented.
 - iv. Please provide the total mileage for extra trips scheduled in inter-SCF network in Fiscal Year 2020. Please also provide average inter-SCF extra trip distance in FY 2020.

RESPONSE:

- a. Extra trips can be scheduled in advance when receiving offloads, or a mailing that is particularly heavy to certain destinations, supplier issues known in advance, and holiday plans to collect volumes or move volumes out of a plant to delivery.
- b. The Postal Service relies on regularly scheduled transportation. Extra trips are to supplement and / or cover gaps in the regular scheduled transportation plan.

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS HAGENSTEIN TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

c.

- i. The expenses in these accounts for Inter-Area, Inter-Cluster, and Inter-P&DC exceptional trips were not included in the baseline costs to calculate the savings because, due to their nature, exceptional trips are unpredictable and cannot be reliably modeled. The savings presented are therefore conservative in the sense that any reduction in exceptional service resulting from the proposed service standard changes would only increase the potential savings.
- ii. Modifying contracts is not a challenge, however there is some risk with any contract change that the rate per mile could increase. Extra trips reduction would result in savings without risk of rate per mile increases.
- iii. Late trips routinely called due to late processing could be eliminated provided the regular scheduled trips have sufficient capacity and can be adjusted to depart later. This will be one of the first actions the Postal Service takes to start capturing savings.
- iv. FY20 SV Network HCR extra trips:
 - Estimated Total Mileage: 42,960,787/year
 - Average Mileage Per Trip: 259.3 miles (sample size: 165,648)

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS HAGENSTEIN TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 3

Question 18. Please refer to Response to POIR No. 1, question 19.d., which states “Using two examples of actual Inter-Area, Inter-Cluster, and Inter-P&DC trips, please map these trips to the most relevant OD Pairs. Please also describe similarities and differences between modeled OD Pairs and contracted trips.”

RESPONSE:

The model uses the same OD pairs that exist for current contracted trips. The model is not constrained to follow the same routings as the existing trips and will build its new routings in the most efficient way to reduce mileage and costs.

Category	Origin Area	Origin District	Destination Area	Destination District	Origin Name	Destination Name
Inter-Area	Western (E)	Dakotas	Southern (G)	Louisiana	Great Falls P&DC	New Orleans LA P&DC
Inter-Area	Southern (G)	South Florida	Eastern (C)	Western New York	Royal Palm FL P&DC	Buffalo NY P&DC
Inter-P&DC	Western (E)	Dakotas	Western (E)	Dakotas	Rapid City SD P&DF	Billings MT P&DC
Inter-P&DC	Northeast (B)	Greater Boston	Northeast (B)	Greater Boston	Central Massachusetts P&DC	Brockton MA P&DC
Inter-Cluster	Western (E)	Salt Lake City	Western (E)	Arizona	BOISE ID P&DC	Tucson AZ P&DC
Inter-Cluster	Eastern (C)	Ohio Valley	Eastern (C)	Western Pennsylvania	Columbus OH P&DC	Pittsburgh PA P&DC

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS HAGENSTEIN TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

Question 19. Please refer to Response to POIR No. 1, question 19.a.ii.

- a. Please list all products included in "International volumes"
- b. Please list all products included in "Priority"
- c. For all products in a. above, provide current service standards.
- d. For all products in b. above, provide current service standards.

RESPONSE:

- a. Inbound/Outbound Letters, Flats, and Packets.
- b. Parcels and Flats.
- c. Outbound International First-Class Mail and Inbound letter post letters and flats follow the First-Class mail domestic service standards to and from the International Service Centers. Refer to the 3-digit pair file submitted with POIR No1 with mode for the service standards.
- d. Please see file in USPS-LR-N2021-1-23.

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS HAGENSTEIN TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

Question 20. Please refer to Response to POIR No. 1, questions 26.b. and 19.a. – 19.c.

The Postal Service provides the number of routings in the baseline model (4,073), optimized surface routing model (3,566), proposed new routings to carry air mail (1,115), and new routings determined cost-effective (319).¹² The Postal Service also provides estimates of trip utilization in the baseline model (66%), optimized surface routing model (74%), trip utilization for the proposed new routings (57%), and for the new routings determined cost-effective (82%). Lastly, the Postal Service reports routings' mileages in the baseline network and in the network which includes all projected changes associated with the proposed service standards for FCM, for each of Inter-Area, Inter-Cluster, and Inter-P&DC contract categories.

- a. Please explain the difference, if any, between a routing and a trip. In your explanation, please include whether a routing and a trip has daily/annual frequency attributed to it.
- b. Please provide the number of routings to which reported mileages for each contract category provided in response to question 26.b. pertain.
- c. If a routing and a trip are not equivalent (do not have same attributes), please provide number of trips per day to which reported mileages for each contract category provided in response to question 26.b. pertain.
- d. Please explain whether it is possible to determine modeled vehicle capacities for each contract category (question 26.b), considering mileages are determined from the number of routings/trips and modeled trailer capacity is known (53' trailers used in the model). If possible to determine, please provide total vehicle capacities in cubic feet associated with daily routings for each contract category.

RESPONSE:

- a. A route and trip in terms of the modeling are the exact same, 319 cost effective routings = 319 cost effective trips. This will include and count multiple trips/routings between the same OD pairs. The estimated trips/routings are daily and are assumed to operate every day.

Category	Trips (daily)
Inter-Area	2,306
Inter-Cluster	1,356
Inter-P&DC	411
Grand Total	4,073

- b.
- c. Routes and Trips are the same in this context so there would be no difference in the metrics.

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS HAGENSTEIN TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

Category	Trips	Total Capacity (ft3)
Inter-Area	2,306	3,631,950
Inter-Cluster	1,356	2,135,700
Inter-P&DC	411	647,325
Grand Total	4,073	6,414,975

d.

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS HAGENSTEIN TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

Question 21. Please refer to Response to POIR No. 1, question 23. For each potential impact described in a. through d., please specify whether any of the two-, three-, four-, and five-day service standard FCM volumes would be more likely affected, and whether any of these volumes would be least likely affected by these potential impacts.

RESPONSE:

Volumes traveling farther distances (4- and 5-day) are more likely to be impacted by the ability to form round trips. Long distance pairs are also more likely to be impacted by the miles-per-hour assumption and the Department of Transportation rules. Despite these risks, the transportation windows account for additional time to mitigate these risks.

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS HAGENSTEIN TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

Question 22. Please refer to the Response to POIR No. 1, question 22. Please provide the number of point-to-point routings in the baseline network and the in the projected network. Please quantify how the proposal will decrease the inefficiencies of the transportation network by decreasing point-to point trips.

RESPONSE:

The baseline model produced 1,896 point-to-point trips while the proposed service standard change scenario produced 1,338 point-to-point trips. The point-to-point trips reduce and the utilization increases due to the ability to transfer mail volumes via consolidation points (STCs).

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MONTEITH TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

Question 23. Please refer to USPS-T-4 at 19, where you state “the proposed changes may improve customer satisfaction... .” Please provide any quantitative or qualitative studies that may have contributed to this conclusion beyond the appendixes provided as part of the testimony.

RESPONSE:

Please see our Response to POIR No. 2, Question 17 (filed on May 21, 2021).

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MONTEITH TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

Question 24. In USPS-T-4, witness Monteith states, “[t]he lower sensitivity of Presort mail to changes in Delivery Time is an important finding. It suggests that the estimated impact to [First-Class Mail] is unlikely to be significant given that Presort Letters account for 65 percent of overall [First-Class Mail] volume and Single-Piece Letters is 28 percent.” Id. at 15. Please also refer to Response to POIR No. 1, question 28.

- a. For the First-Class Mail subject to the proposed service standards, please provide a percentage composition breakdown by mail type. Please include in your response the percentages of the affected mail volumes which are expected to be Presort First-Class Mail and Single-Piece First-Class Mail and sources for these calculations. If you are unable to provide these percentages, please explain.
- b. Please provide the sources for the percentages provided in Response to POIR No. 1, questions 28.a and 28.b.

RESPONSE:

- a. 22 percent of Single-Piece Letters & Cards will be impacted by the changes in service standards.

25 percent of Single-Piece Flats will be impacted by the changes in service standards.

47 percent of Presort Letters & Cards will be impacted by the changes in service standards.

49 percent of Presort Flats will be impacted by the changes in service standards.

The source for the percentages provided above and underlying calculations is Library Reference LR-USPS-N2021-1-20, “First-Class Mail Pieces Impacted by Product Type.”

- b. The source for the percentages provided in response to POIR No. 1, Question 28 a, b is Library Reference LR-USPS-N2021-1-20, “First-Class Mail Pieces Impacted by Product Type.”

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS CINTRON
(REDIRECTED FROM WITNESS MONTEITH)
TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

Question 25. Response to POIR No. 1, question 29.a., states “[w]e provided the 18 percent input to witness Thress to be applied to both First-Class Mail and Periodicals volumes because the end-to-end Periodicals volume impacted by the proposed service standard change traverses our network along with First-Class Mail volume and for the sake of simplicity.” Response to POIR No. 1, question 30 states, “[w]e have some volumes that go through our NDC network, and the timeline for those can range from 6 to 9 days.”

- a. Please confirm that those end-to-end periodical volumes which go into the NDC network do not traverse the network along with FCM volume.” If not confirmed, please explain.
- b. Please provide the percentage of end-to-end Periodical mail volume which traverses the FCM mail network and the percentage of end-to-end Periodical mail volume which traverses the NDC network. If explicit percentages are not available, please discuss their relative frequency of use by the Postal Service.
- c. Please confirm that there are no other shipping pathways for end-to-end periodicals besides those two mentioned above (traversing the FCM network and entering the NDC network). If not confirmed, please discuss the other pathways and when and how often they are used.

RESPONSE:

- a. Confirmed. Periodical volumes which go into the NDC network do not transverse the network with FCM volume.
- b. An estimated 37 percent of end-to-end periodicals are transported on the FCM network. An estimated 6 percent of end-to-end periodicals transverse the NDC network. An estimated 57 percent of end-to-end periodicals are local turnaround. This volume either remains in the processing facilities’ service areas, or remains within the intra-NDC service area.
- c. For the contiguous U.S., no other shipping pathways are normally used for end-to-end periodicals, however, some leakage into the air network is expected.

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS THRESS
(REDIRECTED FROM WITNESS MONTEITH)
TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

Question 26. Response to POIR No. 1, question 29.e., states “[i]t is possible to derive increases in Delivery Time for (1) Presort Letters & Cards, (2) Presort Flats, (3) Single-Piece Letters & Cards, and (4) Single-Piece Flats. Response to POIR No. 1, question 29.f., states “[t]he relationship between average delivery time and mail volume which I modeled in USPS-T-5 was estimated based on total mail volume and average delivery days across all mail. The estimates presented in my testimony represent the average impact across all mail and all mailers and may not be indicative of the specific impact of any particular mailer.”

- a. Please confirm whether it is possible to model the relationship between average delivery time and mail volume for specific mail products, such as those referenced in the Response to POIR No. 1, question 29.e. ((1) Presort Letters & Cards, (2) Presort Flats, (3) Single-Piece Letters & Cards, and (4) Single-Piece Flats).
- b. If confirmed, please explain the advantages and disadvantages of using a more disaggregated model. In your response, please include the reason the Postal Service ultimately chose a more aggregated model.
- c. If not confirmed, please explain why such disaggregated modeling is not possible.

RESPONSE:

- a. Confirmed. The equations which I presented in my testimony used this precise breakdown (in fact, I estimated separate equations for Letters and Cards) (see USPS-T-5, pages 11 through 17). My estimates of the financial impact of the Postal Service's proposals in this case were calculated separately for each of the six equations which I estimated based on the separate estimated delivery coefficients in these equations. The numbers which I cite at page 37 of my testimony are simply the sum of these six separate numbers, which can be found on sheet 'Financial Impact' of the spreadsheet Thress.xlsx which was filed as part of Library Reference LR-N2021-1-5 in this case.

My response to POIR 1, 29.f., perhaps misunderstood what was meant by “more granular inputs”. I interpreted that to refer to differences in the delivery standards associated with particular pieces of mail.

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS THRESS
(REDIRECTED FROM WITNESS MONTEITH)
TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

- b. Please see my response to subpart a.
- c. N/A

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MONTEITH TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

Question 27. Please refer to Library Reference USPS-LR-N2021-1/10, file "06-USPS BHT Q1'19 Mail-PUBLIC.pdf," Slide 35. This slide states, "Uppercase letters denote significant differences at the 95% confidence interval."

- a. Please confirm that in the Q1'19 survey 53% of survey respondents (N=1072) agreed with the statement that the USPS mail service provides fast mail delivery. If not confirmed, please provide an interpretation of the 53% figure.
- b. Please confirm that in the Q1'18 survey 65% of survey respondents (N=1292) agreed with the statement that the USPS mail service is reliable. If not confirmed, please provide an interpretation of the 65% figure.
- c. Please confirm that in the Q1'19 survey 58% of survey respondents (N=1072) agreed with the statement that the USPS mail service is reliable. If not confirmed, please provide an interpretation of the 58% figure.
- d. Please explain the statistical interpretation of the uppercase "C" (and in other cases "A") which appears next to the 65% figure referenced above. In your response, please confirm whether the following is the correct interpretation: 58% of respondents in Q1'19 agreed with the statement that the USPS mail service is reliable; this is statistically different from 65% who agreed with this statement in Q1'18. If not confirmed, please elaborate on the meaning of "significant differences in the 95% confidence level" and provide the correct interpretation.
- e. Please provide a public interpretation relating the Q1'19 Key Driver Index Score of 160 for "Is reliable" and 159 for "Provides fast mail delivery."

RESPONSE:

- a. Confirmed.
- b. Confirmed.
- c. Confirmed.
- d. Confirmed.
- e. Survey respondents each quarter are asked about their overall satisfaction with mail services and then are asked about their agreement with a series of attributes including "is reliable" and "provides fast mail delivery." A full year's data is used with the series of attributes to understand which attributes are most predictive of overall satisfaction. Attributes are ranked using an index score to show which of the attributes are most predictive of overall satisfaction.

Essentially, if USPS could independently improve perceptions on the attribute

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MONTEITH TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

with the largest Key Driver Index Score it would be more likely to improve satisfaction than independently improving lower ranked scores.

In the model run in Q1'19 over a full year's worth of data, "is reliable" and "provides fast mail delivery" were the top two drivers of overall satisfaction out of all the drivers tested. The Q1'19 Key Driver Index Score of 160 for "[i]s reliable" and 159 for "[p]rovides fast mail delivery," indicates that "is reliable" was incrementally more predictive of overall satisfaction relative to "[p]rovides fast mail delivery" based on the prior year's data.

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MONTEITH TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

Question 28. Please see Library Reference USPS-LR-N2021-1/9, Excel file "18 Percent Input.xlsx," tab "FCM Delivery Day Change Calc," cell H10. In USPS-T-4, witness Monteith states, "[t]o develop the projections, Thress evaluated the impact to [First-Class Mail] volume if Delivery Time increased by 18 percent as a result of the proposed service standard changes." Id. at 15. Please also refer to USPS-T-4 stating, "[t]o develop the projections, Thress evaluated the impact to Periodicals if Delivery Time increased by 18 percent as a result of the proposed service standard changes and holding price and costs constant." Id. at 17. Lastly, please refer to USPS-T-5, in which witness Thress states, "[t]he Postal Service estimates that the proposed changes to service standards could increase average delivery time by as much as 18 percent within the affected delivery networks." USPS-T-5 at 36.

- a. Please confirm if Witness Thress used an input for change in Delivery Time of 18.74% as calculated in USPS-LR-N2021-1-9 and not 18.00% as indicated by USPS-T-4 and USPS-T-5.
- b. If not confirmed, please discuss why the more accurate 18.74% figure was not used for the contribution calculations.
- c. Please explain the reason the Postal Service estimates the proposed changes could increase delivery times by "as much as 18 percent," given the underlying calculations show increase in delivery times by more than 18 percent.

RESPONSE:

- a. Not confirmed.
- b. The 18.74 percent (or, 19 percent) would be more accurate for the contribution calculations. This was in error. The Postal Service will file errata in the near future with corrections to the witnesses Monteith and Thress testimonies and also make a correction to witness Monteith testimony relating to the response to POIR No. 1, Question 33(a) (filed on May 17, 2021).
- c. Please see our response to subpart (b). Below, we provided the impact to contribution, revenue, and volume if Delivery Time increased by 19 percent for First-Class Mail and Periodicals as a result of the proposed service standard changes. Also, please see Library Reference LR-N2021-1-21, "19 Percent Input."

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MONTEITH TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

Estimated Financial Impact of the Proposed Service-Standard Changes

	19 Percent Input	18 Percent Input
FCM Contribution	-\$110.9 million	-\$105.6 million
Periodicals Contribution	\$0.8 million	\$0.8 million
Net Impact	-\$110.1 million	-\$104.8 million

Estimated Impact of Proposed Service-Standard Changes – Overall

	Contribution Impact	Volume Impact	Revenue Impact
19 percent input	-\$110.1 million	-527.4 million	-254.7 million
18 percent input	-\$104.8 million	-502.0 million	-\$242.5 million

Estimated Impact of Proposed Service-Standard Changes – First-Class Mail

	Contribution Impact	Volume Impact	Revenue Impact
19 percent input	-\$110.9 million	-523.1 million	-\$253.6 million
18 percent input	-\$105.6 million	-497.9 million	-\$241.4 million

Estimated Impact of Proposed Service-Standard Changes – Periodicals

	Contribution Impact	Volume Impact	Revenue Impact
19 percent input	0.8 million	-4.3 million	-\$1.2 million
18 percent input	0.8 million	-4.0 million	-\$1.1 million

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS THRESS TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

Question 29. Please refer to USPS-T-5 at 24. The average days-to-delivery fell by 9.4% in 2014 and then increased by 14.6% in 2015.

- a. Please explain why the 9.4% decrease in days-to-delivery does not appear in the top figure on page 6 of your testimony.
- b. Please confirm whether you performed a detailed econometric analysis of the relationship between volume and days-to-delivery during the period of large changes that occurred from 2012 – 2015. If confirmed, please provide the results of this analysis, including a discussion of whether you estimated a microeconomic model known as Regression Discontinuity Design. If not confirmed, please explain why you did not perform a more detailed investigation into this time period.

RESPONSE:

- a. The table at page 24 presents annual data for total First-Class Mail. The figures at page 6 of my testimony show quarterly data for First-Class Single-Piece Mail. Hence, the specific numbers are not directly comparable between the two tables.
- b. I did not perform any detailed econometric analysis of the time period from 2012 to 2015 to the exclusion of the periods before and after this time period. The purpose of my testimony was “to provide an estimate of the potential loss of First-Class Mail and Periodicals Mail volumes resulting from the changes in service standards being proposed by the United States Postal Service.” In order to develop the best possible estimate of the specific changes expected from the specific proposals made the Postal Service in this case, it is necessary, but it is not sufficient, to evaluate the impact of the changes in delivery time during the 2012 to 2015 time period.

My understanding of “Regression Discontinuity Design” is that it is similar conceptually to the intervention approach used in several of the econometric equations which I have developed for the Postal Service. Such an intervention can quantify the specific impact of a unique event (e.g., the impact of the Great

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS THRESS TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

Recession on Marketing Mail volumes). But unless one expects such a unique event to exactly repeat itself, this may be of only limited value in estimating the potential impact of unique future events. Including the time periods before and after the 2012 – 2015 period allow one to develop estimates which are more easily and reliably generalized to possible future situations.

It is also important, even in attempting to estimate the unique impact of one-time events, to control for other factors. Hence, even in cases where intervention analysis is warranted, these intervention variables are placed inside existing econometric models which include additional factors, and which span longer sample periods.

It was decided that the best approach here was to add average days to delivery to the existing econometric models to best control for the impact of other factors and to allow for a result (a coefficient on average days to delivery) which could be directly applied to the Postal Service's proposals in this case.

See also my response to POIR No. 2, Question 20 (filed on May 21, 2021).

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS THRESS TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

Question 30. Please discuss the advantages and disadvantages of estimating an Ordinary Least Squares regression model to identify causal parameters outside the scope of a randomized control trial.

- a. Do you find that data drawn from period of analysis, 2000—2020, satisfy the necessary identification assumptions required for estimates based on an Ordinary Least Squares regression model to be unbiased and consistent, therefore allowing the researcher to make statistical statements about the underlying population parameter of interest? If yes, please explain. If no, please explain what other assumptions you have made to allow for the causal interpretation of estimates that is seen throughout this testimony.

RESPONSE:

The primary advantage of an Ordinary Least Squares¹ regression model is the ability to isolate the impact of multiple factors on a single dependent variable (e.g., mail volume). Such models are most reliable when the model is fully specified (i.e., it includes all relevant potential explanatory variables) and the explanatory variables are not meaningfully correlated with each other.

The tradeoff in such modeling, identified in question 31 as the “bias-variance tradeoff”, is between including all possible explanatory factors, which is necessary to ensure the model is unbiased, while limiting the extent to which factors are correlated with one another (i.e., multi-collinearity), to ensure the model is consistent.

Yes. The average days to delivery data have the desirable property of not being meaningfully correlated with the other explanatory variables in the equations which I have estimated here, so that the impact of specific factors can be more clearly identified. See also my responses to POIR No. 2, Question 20 (filed on May 21, 2021), and NPPC/USPS-T-5, Questions 1 and 3 (filed on May 26, 2021).

¹ Technically, my econometric models are Generalized Least Squares (GLS) models. A Generalized Least Squares model allows for somewhat more flexibility than Ordinary Least Squares (OLS) models regarding the assumptions necessary to ensure lack of bias and consistency. The general discussion here is, however, applicable to both OLS and GLS frameworks.

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS THRESS TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

Question 31. Please explain why adding days-to-delivery as an additional covariate in your econometric forecasting model increases the accuracy of the econometric volume forecast.

- a. Please explain why this explanatory variable was not included in any previously filed forecasting models.
- b. Please discuss whether the Postal Service intends to continue to include this explanatory variable in future forecasting models.
- c. Please discuss the bias-variance trade-off that exists when a researcher adds additional explanatory variables to an econometric model, including the implications of the bias-variance trade-off in this specific case of adding additional explanatory variables to this forecasting model, such as days-to-delivery.
- d. In evaluating the merits of including days-to-delivery among the large set of explanatory variables included in the volume forecast model, did you undertake any out-of-sample testing of the final forecasting model. For example, estimating your model based on half of the historical data, and then evaluating the performance of your model, for example, the Mean Squared Error, based on the other half of the historical data.

RESPONSE:

Strictly speaking, the goal of my work in this case was not to develop the most accurate possible econometric forecast model for the Postal Service. And, in fact, I have presented no actual volume forecasts in this case. The purpose of my testimony was to provide the Postal Service with the best possible estimate of the potential impact of its proposed service standard changes on mail volumes (and, by extension, Postal Service revenue and contribution).

While forecast accuracy is always a desirable property of any econometric model, it was not my primary consideration in this case. See, however, my answer to question 30 and to the sub-parts of this question.

- a. Average days to delivery has not previously been included in the Postal Service's regular forecasting models primarily because average days to delivery has generally not varied much over time, so that its possible inclusion in the First-Class Mail equations seemed unlikely to be worth the "bias-variance trade-off".

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS THRESS TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 3

- b. The most recent forecast models used by the Postal Service do include average days to delivery as an explanatory variable. Recent changes in average days to delivery have been more substantial than in the past. Between this and the expected changes to delivery times resulting from the Postal Service's proposals in this case, it seems likely that delivery time will have a larger expected impact on mail volumes over the next few years than it has had historically.
- c. Please see my response to POIR No. 3, Question 30.
- d. The econometric output filed with this case (out_ad.txt in LR-N2021-1-5) includes several out-of-sample analyses. The most significant of these is a set of recursive residuals which present a series of one-quarter-ahead forecast errors expressed on a scale similar to t-statistics.

An example of the recursive residual analysis for First-Class Single-Piece Letters is presented below.

	Recursive Residuals (normalized: $(\ln(\text{Actual}) - \ln(\text{Forecast})) / \text{SE}$)			
	Quarter 1	Quarter 2	Quarter 3	Quarter 4
2007	-0.727	-0.375	0.242	-1.511
2008	0.914	0.800	0.547	-3.417
2009	-0.692	-0.211	-2.554	0.128
2010	1.632	-0.968	0.801	-0.135
2011	-0.229	-1.119	0.498	0.691
2012	0.440	0.548	0.886	3.074
2013	0.317	0.723	1.303	-1.241
2014	-0.370	0.374	-0.441	-0.147
2015	-2.076	-1.238	0.398	0.689
2016	1.288	-0.135	0.115	-0.626
2017	0.184	-0.749	-0.278	2.661
2018	0.752	0.330	-1.458	-0.675
2019	3.080	-0.745	-0.134	-1.111
2020	0.414	0.274	-0.159	-0.109

In addition, an analysis of the most recent eight quarters was conducted for each

**RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS THRESS TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 3**

equation. Dummy variables are added to the model for each of the last eight quarters of the sample period. The coefficients of these dummy variables can be interpreted as out-of-sample forecast errors for this time period.

This analysis for First-Class Single-Piece Letters is presented below.

Quarters Dummied Out			
	Coefficients	Std. Error	T-Ratio
D2019Q1	0.044937	0.015727	2.857218
D2019Q2	0.001924	0.018129	0.106113
D2019Q3	0.007277	0.018459	0.394246
D2019Q4	-0.006995	0.019113	-0.365997
D2020Q1	0.020812	0.020721	1.004388
D2020Q2	0.016502	0.021118	0.781425
D2020Q3	0.011098	0.026390	0.420531
D2020Q4	0.009300	0.023915	0.388892

Mean Dummy Coefficient 0.013107
Mean-Squared Error 0.000380

Results for the other equations which I presented in my testimony can be found in the file out_ad.txt which was filed as part of Library Reference LR-N2021-1-5 (filed on April 21, 2021) in this case.

I did not make any efforts to conduct any more extensive out-of-sample analysis, such as estimating my model over only half of the sample period.